SONY

Freedom of sound

UWP Series

UHF Synthesised Wireless Microphone System

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UWP-Series

✧ INTRODUCTION

Interference-free, Affordable Operations – with the Sony UWP Series UHF Synthesised Wireless Microphone System

As the use of wireless microphone systems has increased dramatically for diverse applications, low-cost systems have become more popular, but transmission stability and noise problems have often been overlooked.

Sony presents the ideal solution for budget-conscious users seeking rock-steady wireless operations — the UWP Series UHF Synthesised Wireless Microphone System.
The UWP Series consists of six core elements — a lavalier/bodypack transmitter, a wireless handheld microphone, a plug-on transmitter, a portable tuner, a half-rack-size tuner and a tuner module.These are available in seven turnkey packages, each comprising a microphone, transmitter and tuner, for a ready-to-go system straight out of the box. Each package has been carefully compiled to address specific operational needs, meaning the UWP Series can virtually adapt to almost any application.
The UWP Series excels in transmission stability. Sophisticated wireless technologies, developed for top-of-the-line Sony wireless microphone systems, have been incorporated, including the UHF PLL-Synthesised system, space-diversity reception and a tone squelch function. These capabilities are typically found only on high-end wireless systems.

Whether you use it with low-cost ENG, EFP or PA systems, the UWP Series delivers the convenience of non-compromised wireless microphone operation at a very affordable price.

✧ UWP SERIES COMMON FEATURES

STABLE TRANSMISSION AND RECEPTION

The UWP Series Wireless Microphone System uses three core technologies to provide stable transmission and reception:

PLL Synthesised System

Key to achieving stable transmission and reception is the use of a stable carrier signal to avoid interference with other frequency channels and to allow the selection of a preferred channel from multiple frequencies. The UWP Series achieves this by using a UHF PLL (Phase Locked Loop) frequency Synthesised system, which provides accurate carrier signal frequencies.
This system is used in both the transmitters and tuners, so that a stable carrier is generated at the transmitter and accurately tuned in at the tuner. This PLL-controlled system provides highly stable, user-selectable frequencies in increments of 125 kHz.

Space Diversity Reception System

Typically, wireless microphone transmission systems can be subject to reception interruptions (signal dropout), but the UWP Series reduces this to a minimum. By utilising a space-diversity reception system, it achieves stable reception by using dual-antenna inputs/reception circuits. These receive signals over two different paths and automatically select the stronger RF signal for output. The space diversity reception system is adopted in all UWP tuners – the portable tuner, half-rack-size tuner and tuner module alike. What´s more, the antennas of the portable and half-rack-size tuners each allow for angle adjustments, which help to further eliminate signal dropout.

Tone Squelch Circuitry

When operating a wireless microphone system, it is essential that the tuner does not pick up carrier signals transmitted from other systems. In order to avoid this, the UWP Series transmit a 32 kHz pilot-tone signal along with the audio signal. The tuner´s squelch circuit recognises this tone signal and outputs the audio signal only when this tone signal is received. This function prevents the output of unwanted signals and noise from other signal transmissions in the air, as well as the RF noise and popping noise that occur when the transmitter is powered on or off.

PRE-PROGRAMMED OPERATING FREQUENCIES

The transmitters and tuners included in the UWP Series incorporate pre-programmed frequencies that meet the wireless-communication regulations of each country. The UWP Series operates within the following frequency ranges: 798 MHz to 822 MHz or 838 MHz to 862 MHz (189 selectable frequencies).

SIMULTANEOUS MULTI-CHANNEL OPERATION

The UWP Series allows simultaneous operation of up to 16 wireless microphones. Optimum combinations of practically tested, interference-free frequencies are stored in the UWP tuners. By using the pre-programmed frequency groups, users can easily choose interference-free frequencies for the transmitters and tuners, simplifying the task of system setup.

PACKAGE LINE-UP

UWP-C1

- Consists of an omni-directional lavalier microphone, bodypack transmitter and portable tuner
- Suitable for a wide range of applications, from news gathering and interviews to talk shows and conferences
- The lavalier microphone is supplied with a microphone windscreen and microphone-holder clip
- The bodypack transmitter is supplied with a belt clip
- The portable tuner is supplied with a microphone stand adaptor, shoe-mount adaptor and belt clip for mounting on a camcorder and output cables (3-pole mini-plug/XLR-type, 3-pole mini-plug/stereo mini-plug)

UWP-C2

- Consists of a handheld microphone and portable tuner
- Suitable for news gathering and for use in PA systems
- The handheld microphone is supplied with a microphone holder
- The portable tuner is supplied with a microphone stand adaptor, shoe-mount adaptor and belt clip for mounting on a camcorder and output cables (3-pole mini-plug/XLR-type, 3-pole mini-plug/stereo mini-plug)

UWP-C3

- Consists of a plug-on transmitter and portable tuner
- Suitable for a wide range of applications, from news gathering and interviews to field productions
- The plug-on transmitter is supplied with a softcase
- The portable tuner is supplied with a shoe-mount adaptor and belt clip for mounting on a camcorder and output cables (3-pole mini-plug/XLR-type, 3-pole mini-plug/stereo mini-plug)

UWP-S1

- Consists of a uni-directional lavalier microphone, bodypack transmitter and half-rack-size tuner
- Suitable for use in PA systems
- The lavalier microphone is supplied with a microphone windscreen and microphone-holder clip
- The bodypack transmitter is supplied with a belt clip
- The half-rack-size tuner is supplied with an AC/DC adaptor

UWP-S2

- Consists of a handheld microphone and half-rack-size tuner
- Suitable for use in PA systems
- The handheld microphone is supplied with a microphone holder
- The half-rack-size tuner is supplied with an AC/DC adaptor

UWP-X1

- Consists of a uni-directional lavalier microphone, bodypack transmitter and tuner module
- Suitable for use in PA systems
- The lavalier microphone is supplied with a microphone windscreen and microphone-holder clip
- The bodypack transmitter is supplied with a belt clip

UWP-X2

- Consists of a handheld microphone and tuner module
- Suitable for use in PA systems
- The handheld microphone is supplied with a microphone holder

LAVALIER MICROPHONE AND BODYPACK TRANSMITTER

Lavalier Microphones

- Omni-directional type for the UWP-C1 package
- Uni-directional type for the UWP-S1 and UWP-X1 packages
- 1.2 m (3.9 feet) microphone cable
- Supplied with a microphone windscreen and microphone-holder clip

Bodypack Transmitter

- Compact and lightweight design
- Attenuator function allows adjustment of the microphone-input level to suit each user's voice
- Selectable RF-output level: 5 mW output is suitable for simultaneous multi-channel operation, while 30 mW output is intended for long-distance transmission
- Approximately six hours of continuous operation with two AA-size alkaline (LR6) batteries
- An LCD screen provides extensive information, including the operating channel number and its frequency in MHz, attenuator level, RF-output level setting (High/Low), audio-input status, RF-output status, transmitter-battery status and accumulated operating time
- A 3.5 mm dia., 3-pole mini-jack input connector with lock mechanism accepts the output of any lavalier microphones equipped with a 3.5 mm dia. mini plug, as well as the output of the supplied lavalier microphone
- Supplied with a belt clip

HANDHELD MICROPHONE

- Uni-directional, dynamic microphone capsule
- Internal antenna design
- Attenuator function allows adjustment of the audio-input level to suit each user´s voice
- Selectable RF-output level: 5 mW output is suitable for simultaneous multi-channel operation, while 30 mW output is intended for long-distance transmission
- Approximately six hours of continuous operation with two AA-size alkaline (LR6) batteries
- An internal LCD screen provides extensive information, including the operating channel number and its frequency in MHz, attenuator level, RF-output level setting (High/Low), audio-input status, RF-output status, transmitter-battery status and accumulated operating time
- Supplied with a microphone holder

PLUG-ON TRANSMITTER

- Converts a wired microphone to a wireless microphone via an XLR connector
- Compact and lightweight body provides balanced handling
- Attenuator function allows adjustment of the microphone-input level
- Durable connecting mechanism with a microphone for dependable operation
- 50 mW RF power output for stable and long-distance transmission
- MIC/LINE input level switchable
- A backlit LCD provides extensive information, including the operating channel number and frequency in MHz, attenuator level, audio-input status, RF-output status, transmitter-battery status and accumulated operating time
- An LED indicator for audio-input status
- Approximately six hours of continuous operation with two AA-size alkaline (LR6) batteries
- Supplied with a soft case

Rear panel

HALF 19-INCH RACK-SIZE TUNER

- Space diversity reception system for stable RF reception
- Angle-adjustable antennas to help eliminate signal dropout
- RF squelch function virtually eliminates ambient noise and unwanted signals from other wireless microphone systems
- Equipped with both XLR (balanced) and 1/4-inch phone (unbalanced) type output connectors. The output level on the XLR-type connector can be switched between MIC and LINE levels.
- A channel search function automatically seeks and selects the same RF signal frequency as set on the UWP transmitter
- An LCD screen displays the operating channel number and its frequency in MHz, plus the audio-output status and RF-input level
- A green LED indicator illuminates when RF input signals are appropriately received
- Stereo headphone jack with monitor volume-control on the front panel
- Supplied with an AC/DC adaptor

TUNER MODULE

- Compact, plug-in diversity tuner module: up to two tuner modules can be installed into a Sony all-in-one type presentation mixer/amplifier (SRP-X700P or SRP-X500P), while a maximum of six modules can be installed in the Sony MB-X6 tuner base unit
- Space diversity reception system for stable RF reception
- RF squelch function virtually eliminates ambient noise and unwanted signals from other wireless microphone systems
- An auto channel search function automatically selects unoccupied channels
- A backlit LCD screen displays the operating channel number and its frequency in MHz, plus the audio-output status and RF-input level
- A green LED indicator illuminates when RF-input signals are appropriately received

Photo shows tuner modules installed in the SRP-X500P

TRANSMITTER/TUNER FEATURES

PORTABLE TUNER

- Space diversity reception system for stable RF reception
- Angle-adjustable antennas to help eliminate signal dropout. This feature additionally provides mounting-position flexibility when the portable tuner is mounted on a camcorder.
- RF squelch function virtually eliminates ambient noise and unwanted signals from other wireless microphone systems
- A channel search function automatically seeks and selects the same RF signal frequency as set on the UWP transmitter
- An LCD screen provides extensive information, including the operating channel number and its frequency in MHz, audio output status, RF-input level, tuner-battery status and accumulated operating time
- A green LED indicator illuminates when RF-input signals are appropriately received
- Approximately six hours of continuous operation with two AA-size alkaline (LR6) batteries
- Stereo mini jack with monitor-volume control
- Supplied shoe-mount adaptor enables easy mounting on Sony camcorders. A microphone-stand adaptor*, belt clip and two output cables (3-pole mini-plug/XLR-type, 3-pole mini-plug stereo mini-plug) are also provided.

*The microphone-stand adaptor is not included in the UWP-C3 package.

Photo shows portable tuner mounted on a microphone stand

Photo shows portable tuner mounted on a HVR-Z1E HDV camcorder

PORTABLE TUNER AND CAMCORDER COMBINATION

	Camcorder/Tuner Interfaces		Applicable Wireless Microphone Tuners		
	Mic Input Connector	Audio Input Connector	UWP-C1	UWP-C2	UWP-C3
HDV Camcorders					
HVR-Z1E	—	XLR 3-pin (x2)			
HVR-V1E	—	XLR 3-pin (x2)			
HVR-A1E	Stereo mini-jack (x1)	XLR 3-pin (x2)			
DVCAM Camcorders					
DSR-PD170P	—	XLR 3-pin (x2)			

OPTIONAL ACCESSORIES

MB-X6 TUNER BASE UNIT

- Accommodates up to six tuner modules included in the UWP-X1/X2 package, for up to six channels of simultaneous operation
- Addition of the WD-850A or WD-880A allows multi-channel operation with even more channels
- Easy mechanism for attaching and detaching tuner modules
- RF input attenuator switch (10 dB/0 dB)
- Balanced XLR output connector for each tuner and mix output
- Selectable output level: -58 dBu (for MIC) or -20 dBu (for LINE) at ±5 kHz deviation at 1 kHz modulation
- Auto channel search function automatically selects unoccupied channels
- Supplied with passive antennas
- Modular, 1U high, 19-inch rack unit

Photo shows MB-X6 with six tuner modules installed

Rear panel

	MB-X6
Receiving channels	6 channels when accommodating 6 tuner modules included in the UWP-X1/X2 package
Receiving frequencies	798 MHz to 822 MHz (TV channels 62 to 64) or 838 MHz to 862 MHz (TV channels 67 to 69)
Audio output connector	XLR-3-32 type (x7), balanced
Audio output level	-20 dBu (LINE level) or -58 dBu (MIC level)
Antenna attenuator level	0 dB or 10 dB
Antenna connectors	BNC-R type (x2), 50 Ω
Power requirements	AC 230 V, 50/60 Hz
Power consumption	30 W when accommodating six tuner modules included in the UWP-X1/X2 package
Dimensions (W x H x D)	482 x 44 x 285 mm (19 x 1 3/4 x 11 1/4 inches)
Mass	Approx. 5.5 kg (12 lb 2 oz)
Supplied accessories	Antennas (1 pair), AC power cord (x1), Operating instructions (x1)

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OPTIONAL ACCESSORIES

ECM-77BMP Lavalier Microphone

- High-performance, miniature microphone
- Omni-directional electret condenser microphone
- Frequency response: 40 Hz to 20 kHz
- Sensitivity: -39.0 dB (11.2 mV) (0 dB = 1 V/Pa, at 1 kHz)
- Microphone head: 5.6 mm (1/4 inch) dia. x 12.5 mm (1/2 inches), approx. 1.5 g (0.05 oz)
- Cable length: 1.2 m (3.9 feet)
- Supplied with 3-pole mini-jack with a stable lock mechanism for use with the UWP series
- Supplied accessories: Single/horizontal-type tie clip (x1), metal-mesh type windscreen (x1), operating instructions (x1)

ECM-44BMP Lavalier Microphone

- Omni-directional, electret condenser microphone
- Superior sound quality
- Frequency response: 40 Hz to 15 kHz
- Sensitivity: -40 dB (10 mV) (0 dB = 1 V/Pa, at 1 kHz)
- Microphone head: 8.5 mm (11/32 inch) dia. x 14.5 mm (19/32 inches), approx. 2 g (0.07 oz)
- Cable length: 1.2 m (3.9 feet)
- Supplied with 3-pole mini-jack with a stable lock mechanism for use with the UWP series
- Supplied accessories: Single/horizontal-type tie clip (x1), urethane type windscreen (x1), operating instructions (x1)

ECM-166BMP Lavalier Microphone

- Uni-directional, electret condenser microphone
- Resistant to howling by rejecting indirect sound
- Frequency response: 100 Hz to 10 kHz
- Sensitivity: -45 dB (5.6 mV) (0 dB = 1 V/Pa, at 1 kHz)
- Microphone head: 12.5 mm (1/2 inch) dia. x 23.5 mm (15/16 inches), approx. 3.5 g (0.12 oz)
- Cable length: 1.2 m (3.9 feet)
- Supplied with 3-pole mini-jack with a stable lock mechanism for use with the UWP series
- Supplied accessories: Single/horizontal-type tie clip (x1), urethane type windscreen (x1), operating instructions (x1)

ECM-322BMP Headset Microphone

- Headset microphone for multimedia presentation applications
- Omni-directional microphone capsule for clear voice pickup from any direction
- Extra light weight of only 15 g (0.5 oz) excluding the cable
- Adjustable microphone position
- Secure and comfortable fit
- Frequency response: 70 Hz to 15 kHz
- Sensitivity: -43 dB (7.1 mV) ±3 dB (0 dB = 1V/Pa, at 1 kHz)
- Cable length: 1.4 m (4.5 feet)
- Equipped with 3-pole mini-jack with a stable lock mechanism for use with the UWP series
- Supplied accessories: Carrying case (x1), operating instructions (x1)

SPECIFICATIONS

	Bodypack Transmitter	Handheld Microphone	Plug-on Transmitter
Oscillator	Crystal-controlled PLL synthesiser		
Type of emission	F3E		
Carrier frequencies	798 MHz to 822 MHz (TV channels 62 to 64) or 838 MHz to 862 MHz (TV channels 67 to 69) Users may choose from 189 frequencies on each model.		
RF power output	30 mW or 5 mW (selectable)	30 mW or 5 mW (selectable)	50 mW
Antenna	1/4 λ wave length wire	1/4 λ wave length wire (internal)	Integral type
Pilot tone signal	32 kHz		
Frequency response	50 Hz to 18 kHz (typical)	100 Hz to 18 kHz (typical)	50 Hz to 18 kHz (typical)
Reference deviation	±5 kHz (-60 dBV, 1kHz input)	±5 kHz (94 dB SPL, 1kHz input)	±10 kHz (-60 dBV, 1kHz input)
Signal-to-noise ratio	60 dB or more (±5 kHz deviation at 1 kHz modulation, A-weighted)		60 dB or more (±10 kHz deviation at 1 kHz modulation, A-weighted)
Microphone capsule	—	Dynamic capsule (uni-directional)	—
Audio attenuator adjustment range	0 to 21 dB (in 3 dB steps)		
Audio input level	-60 dBV (at 0 dB attenuator level)	—	MIC input position: -60 dBV (at 0 dB attenuator level), LINE input position: +4 dBu
Audio input connector	3.5 mm (5/32 inch) dia., 3-pole mini jack	—	XLR-3-11C type
Max. input sound pressure level	—	151 dB SPL (at 21 dB attenuator level)	—
Indicators LCD	Operating channel number/frequency, attenuator level, RF-output level (High/Low), audio input status transmitter battery status and accumulated operating time		Operating channel number/frequency, attenuator-level, audio input status, RF-output status, transmitter battery status and accumulated operating time
LED	Power status		Audio-input status
Power requirements	DC 3.0 V (with two AA-size alkaline (LR6) batteries)		
Battery life	Approx. 6 hours with Sony AA-size alkaline (LR6) batteries at 25 °C (77 °F) at 30 mW output		Approx. 6 hours with Sony AA-size alkaline (LR6) batteries at 25 °C (77 °F) at 50 mW output
Dimensions (W x H x D)	63 x 100 x 27 mm (2 1/2 x 4 x 1 1/8 inches)	φ52 x 240 mm (φ21/8 x 9 1/2 inches)	44 x 99 x 36 mm (1 3/4 x 4 x 1 7/16 inches)
Mass	Approx. 140 g (4.9 oz) including batteries	Approx. 300 g (10.6 oz) including batteries	Approx. 185 g (6.5 oz) including batteries
Supplied accessories	Omni-directional (UWP-C1)/Uni-directional (UWP-S1/X1)lavalier microphone (x1),windscreen (x1), microphone-holder clip (x1), belt clip (x1)	Microphone holder (x1)	Soft case (x1)

	Portable Tuner	Half 19-Inch Rack-Size Tuner	Tuner Module
Oscillator	Crystal-controlled PLL synthesizer		
Type of reception	Space diversity		
Receiving frequencies	798 MHz to 822 MHz (TV channels 62 to 64) or 838 MHz to 862 MHz (TV channels 67 to 69) Users may choose from 189 frequencies on each model.		
Antenna	1/4 λ wave length wire		
Pilot-tone signal	32 kHz		
RF squelch level	15 dBμ	25 dBμ	
Frequency response	50 Hz to 18 kHz (typical)		
Reference deviation	±5 kHz (at 1kHz modulation)		
Signal-to-noise ratio	60 dB or more (±5 kHz deviation at 1 kHz modulation, A-weighted)		
Audio output connector	3.5 mm (5/32 inch) dia., 3-pole mini jack (x1), unbalanced	1/4-inch phone jack (unbalanced) or XLR-3-32 type (balanced)	–
Audio output level	-58 dBm	XLR-3-32: -28 dBm (LINE level) or -58 dBm (MIC level) 1/4-inch phone jack: -30 dBm	–
Monitor output connector	3.5 mm (5/32 inch) dia., stereo mini jack (x1)	1/4-inch stereo mini jack (x1)	–
Monitor output level	5 mW (at 16 Ω)		–
Indicators LCD	Operating channel number/frequency, audio-output status, RF-input level, tuner battery status, and accumulated operating time	Operating channel number/frequency, audio-output status, RF-input level	
LED	RF-input status		
Power requirements	DC 3.0 V (two AA-size alkaline (LR6) batteries)	DC 9.0 V	
Battery life	Approx. 6 hours (with Sony AA-size alkaline (LR6) batteries at 25 °C (77 °F)	–	
Dimensions (W x H x D)	63 x 100 x 30 mm (2 1/2 x 4 x 1 3/16 inches)	212 x 44 x 209 mm (8 3/8 x 1 3/4 x 8 1/4 inches)	56.6 x 25.5 x 121.0 mm (2 1/2 x 1 1/16 x 4 7/8 inches)
Mass	Approx. 180 g (6 oz) including batteries	Approx. 1.3 kg (2 lb 14 oz)	Approx. 150 g (5.3 oz)
Supplied accessories	Microphone stand adaptor (x1)*, shoe-mount adaptor (x1), belt clip (x1), output cable (x2, 3-pole mini-plug/XLR-type, 3-pole mini-plug/stereo mini-plug)	AC/DC adaptor (x1)	–

*Microphone stand adaptor is not included in the UWP-C3 package.

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